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ART 32 - PCTClaims

1. A method for processing data objects in a distributed data processing system,
said distributed data processing system having a plurality of software and/or hardware
5. nodes being communicatively connectable,
the method comprising the steps of:
defining a first environment for processing objects at a first level of
abstraction that is independent of the software/hardware platform of said nodes;
defining a second environment for processing objects at a second level of
10. abstraction that is dependent on the software/hardware platform of said nodes;
defining in said first environment a first object model with a first category of
object aspects;
defining in said second environment a second object model with a second
category of object aspects;
15. synchronizing said first object model of said first environment with said
second object model of said second environment;
defining an object in accordance with said first and second models
associating a selectable set of object aspects from said first and second object aspect
categories;
20. generating an instance of said object;
processing said object instance in said first and second environments
dependent on said associated set of object aspects.
2. The method as recited in any of the preceding claim, wherein predefined
25. object connectivity means, in the shape of software code portions and protocols,
communicatively coupled to said first, platform independent environment, are devised to
interface with and execute data communications between an internal entity situated
within and an external entity situated without said defined first and second environments.

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3. The method as recited in the preceding claim, wherein an instance of said first, platform independent environment is configured together with an instance of said second, platform dependent environment and object connectivity means to constitute a
5 object provider functionality.
4. The method as recited in any of the preceding claim, wherein an instance of said first, platform independent environment is configured together with an instance of said second, platform dependent environment to constitute a service object functionality.
10
5. The method as recited in the preceding claim, wherein a service provider functionality is configured together with and a service consumer functionality constituting a consumer/provider subset of the distributed system.
- 15 6. The method as recited in the preceding claim, wherein routing means enables routing of data and control signals within said consumer/provider subset of the distributed system.
7. The method as recited in the preceding claim, wherein authentication means
20 provides authentication functionality in accessing said consumer/provider subset of the distributed system.
8. The method as recited in the preceding claim, wherein provisioning means enables provisioning of objects to a consumer within said consumer/provider subset of
25 the distributed system and adapts said objects to the technical configuration of the consumer apparatus.
9. The method as recited in any of the preceding claim, wherein said object

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instance when it is generated is associated with an identification indication that is unique within said distributed system.

10. The method as recited in any of the preceding claim, wherein an object is
5 defined by means of a plurality of aspects comprising an object property definition, an
interface definition, an object instance aspect and an object instance reference aspect.
11. The method as recited in any of the preceding claim, wherein data is
encapsulated in an object instance by means of an attribute devised to store a selectable
10 predetermined type of basic entity for containing data, said type of basic entity being
dependent on the type of data to be stored.
12. The method as recited in the preceding claim, wherein an attribute of a first
object instance is devised to contain a reference to a second object instance for accessing
15 or activating a selectable content of said second object instance.
13. The method as recited in any of the preceding claim, wherein an object
instance is accessed or activated by means of a portion of executable code associated
with said object and devised to perform a predefined task of said object.
20
14. The method as recited in the preceding claim, wherein said portion of
executable software code is available and devised to activate execution of functionality
or operations of said object instance, or to access or manipulate data that is encapsulated
in the object.
25
15. The method as recited in any of the preceding claim, wherein information is
encapsulated in an object instance at a first node in said distributed system and is
accessible, dependent on predetermined access parameters, from an arbitrary second

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node in said distributed system.

16. The method as recited in any of the preceding claim, wherein a service,
possibly involving software logic, is encapsulated in an object instance at a first node in
5 said distributed system and is accessible, dependent on predetermined access parameters,
from an arbitrary second node in said distributed system.
17. The method as recited in any of the preceding claim, wherein an object is
devised to represent a physical entity, an object instance thus being defined to access,
10 interface with or control said physical entity.
18. The method as recited in any of the preceding claim, wherein all information
within the distributed system is stored in common and single format and structured in a
common way independent of the type of said information.
- 15 19. The method as recited in any of the preceding claim, wherein an object and a
software component within said distributed system are expressed in a common
predetermined language and with a common predetermined set of language rules.
- 20 20. A system for processing data objects in a distributed data processing system,
said distributed data processing system having a plurality of software and/or hardware
nodes being communicatively connectable, comprising means for realizing the steps and
functions of any of the preceding claims.
- 25 21. A computer program product for processing data objects in a distributed data
processing system, said distributed data processing system having a plurality of software
and/or hardware nodes being communicatively connectable, comprising computer
program code portions devised to direct a data processing system to perform the steps

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and functions of any of the preceding claims.

22. A network based system for enabling a user to gain access to services and files, with steps and functions according to any of the preceding claims, further comprising:

a distribution and synchronization server 12 devised for distribution and synchronization of service and file data;

a behave server 14 devised to be used by external actors to interact with services and to perform scripts defining a predetermined behavior such as data manipulation or execution of logic;

a service delivery server 16 that is devised to act upon requests for services, loads the service, adapts it and then delivers it to a requesting user 11;

a file delivery server 18 that is devised to act in response to a request service signal for a certain file, loads the file, adapts it and then delivers it to a requesting user

11.

23. The system of any of the preceding claims, wherein the access to information is independent of the user access device, which may be a conventional computer, a WAP device, a mobile phone or any other communication device that is connectable to the system.

24. The system of the preceding claim, wherein the behave server 14 is used by a user 11 to manipulate information or a service.

25. The system of any of the preceding claims, wherein each behave server 14, service delivery system 16 and file delivery system 18 has a core module that includes a service runtime device, a behave runtime device, a document format (XDF) runtime device and a service processing unit.

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26. The system of any of the preceding claims, wherein the system is devised to give access to different functionality dependent on the technical capabilities of the user communication device.

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27. The system of any of the preceding claims, wherein a service is requested by a user 11 by sending a request service signal 36 to the service delivery system 16, whereupon any possibly needed software code is executed in the server system and the service is delivered by presenting the resulting information on the communication device
10 of the user.

28. The system of any of the preceding claims, wherein the system constitutes an Internet based operating system enabling a user to gain access to services and files.

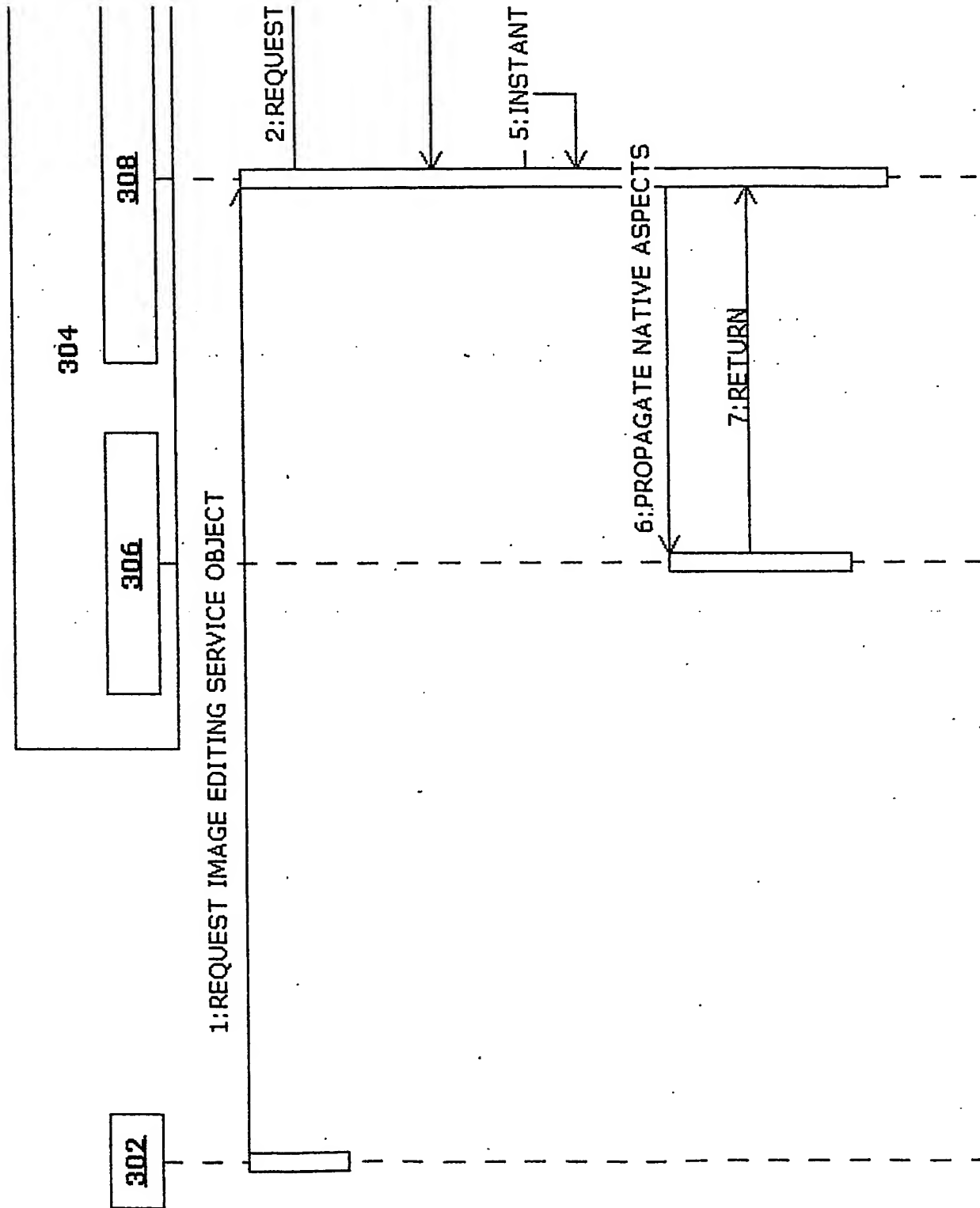


FIG. 3

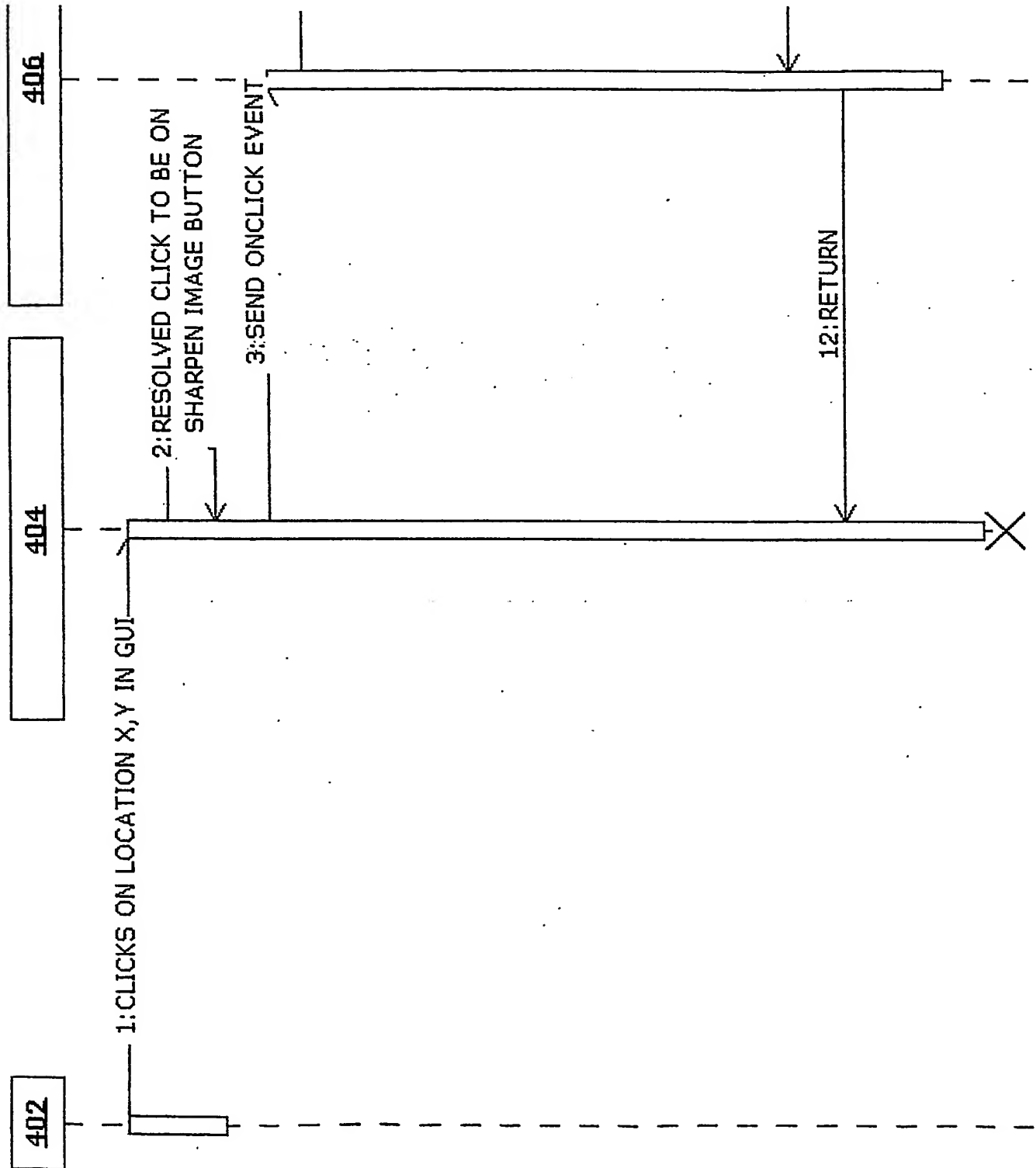


FIG. 4

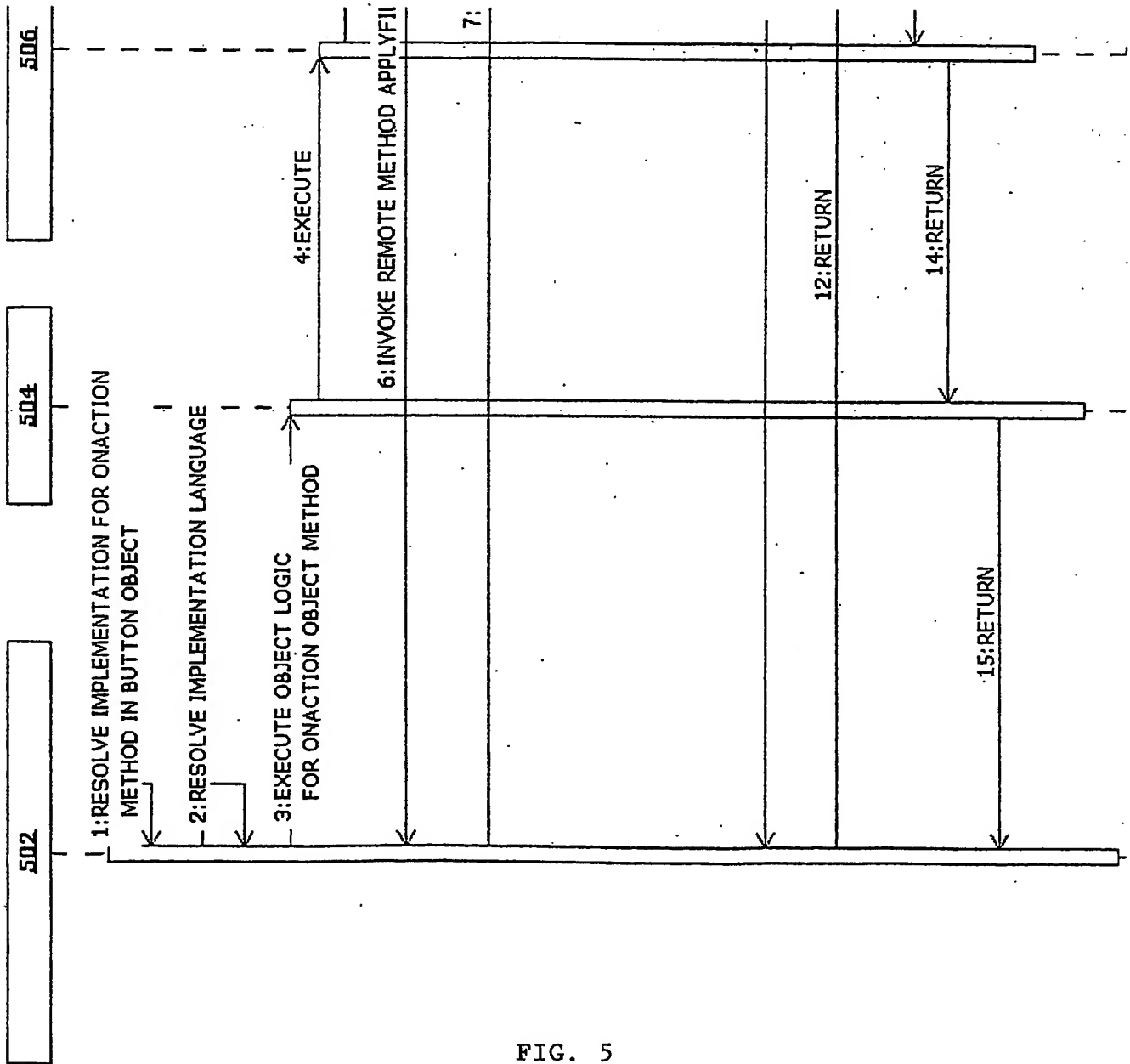


FIG. 5